

Serial No.: 09/648,044
Docket N .: MIO0054PA

Remarks

Claims 1-14, and 45-46 are pending in the application.

Claim Rejections - 35 USC § 102(b)/103(a)

Claims 1, 3, 5-9 and 45 are rejected under 35 USC 102(b) as being anticipated by, or in the alternative, under 35 USC 103(a) as obvious over Akram et al. (WO9931732A). Claims 2, 4, 12-14 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akram '732. Claim 10 is rejected as being unpatentable over Akram '732 in view of Admitted Prior Art (APA). Claims 11-14 are rejected as being unpatentable over [Pan] (5,750,435) in view of Motoyoshi et al (JP 6-53492). Independent claims 1, 3, 12, and 45 were previously amended to recite features neither disclosed nor suggested by the cited art.

Applicant do not argue with the fact that Akram et al and Pan teach diffusing ions underneath one or both sides of the gate structure. However, as previously pointed out, using the methods disclosed by these references results in the portion(s) of the gate oxide underneath the gate structure having an ion concentration **lower than** those adjacent portions not covered (overlapped) by the gate structure. In other words, the overlap region of Akram et al and/or Pan has a portion of the gate oxide layer inward of the source region and adjacent the drain region which has an ion implant concentration **lower than** in remaining portions of the oxide layer adjacent both sides of the gate electrode.

However, in an attempt to place the application in a condition for allowance, the Applicants have amended independent claims 1, 3, 12, and 45 to clarify that a first portion of the oxide layer under the gate has a higher ion concentration than a second portion of the oxide layer underneath the gate and those remaining portions that extend outwardly from the sides of the gate. Such features are neither disclosed nor suggested by the cited references.

The remaining rejections are noted by the Applicants but are believed moot in view of the above amendments to independent claims 1, 3, 12, and 45. Accordingly, Applicants assert that claims 1,3, 12 and 45, and the claims that depend therefrom, are


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patentable over the cited prior art and, therefore, respectfully requests that the anticipation and obviousness rejections to the claims be withdrawn.

The Applicants respectfully submit that, in view of the above amendments and remarks, the application is now in condition for allowance. The Examiner is encouraged to contact the undersigned to resolve efficiently any formal matters or to discuss any aspects of the application or of this response. Otherwise, early notification of allowable subject matter is respectfully solicited.

Respectfully submitted,
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